$\dfrac{0590}{0925}$

```
RAW SEQUENCE LISTING          DATE: 09/13/2001
PATENT APPLICATION:  US/09/938,418    TIME: 11:04:36

      Input Set : A:\P5009R1_sequence_listing.wpd
      Output Set: N:\CRF3\09132001\I938418.raw
```

ENTERED

```
 3 <110> APPLICANT: Ashkenazi,Avi J.
 4         Goddard,Audrey
 5         Godowski,Paul
 6         Gurney,Austin L.
 7         Polakis,Paul
 8         Williams,P.Mickey
 9.        Wood,William I.
10         Wu,Thomas D.
11         Zhang,Zemin
13 <120> TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
14         TREATMENT OF TUMOR
16 <130> FILE REFERENCE: P5009R1
C--> 18 <140> CURRENT APPLICATION NUMBER: US/09/938,418
C--> 18 <141> CURRENT FILING DATE: 2001-08-23
18 <150> PRIOR APPLICATION NUMBER: 60/081,071
19 <151> PRIOR FILING DATE: 1998-04-07
21 <150> PRIOR APPLICATION NUMBER: 60/085,697
22 <151> PRIOR FILING DATE: 1998-05-15
24 <150> PRIOR APPLICATION NUMBER: 60/097,022
25 <151> PRIOR FILING DATE: 1998-08-18
27 <150> PRIOR APPLICATION NUMBER: 60/101,922
28 <151> PRIOR FILING DATE: 1998-09-24
30 <150> PRIOR APPLICATION NUMBER: 60/103,679
31 <151> PRIOR FILING DATE: 1998-10-08
33 <150> PRIOR APPLICATION NUMBER: PCT/US99/05028
34 <151> PRIOR FILING DATE: 1999-03-08
36 <150> PRIOR APPLICATION NUMBER: PCT/US99/12252
37 <151> PRIOR FILING DATE: 1999-06-02
39 <150> PRIOR APPLICATION NUMBER: PCT/US99/20111
40 <151> PRIOR FILING DATE: 1999-09-01
42 <150> PRIOR APPLICATION NUMBER: PCT/US99/28565
43 <151> PRIOR FILING DATE: 1999-12-02
45 <150> PRIOR APPLICATION NUMBER: PCT/US00/04342
46 <151> PRIOR FILING DATE: 2000-02-18
48 <150> PRIOR APPLICATION NUMBER: PCT/US00/04341
49 <151> PRIOR FILING DATE: 2000-02-18
51 <150> PRIOR APPLICATION NUMBER: PCT/US00/05841
52 <151> PRIOR FILING DATE: 2000-03-02
54 <150> PRIOR APPLICATION NUMBER: PCT/US00/08439
55 <151> PRIOR FILING DATE: 2000-03-30
57 <150> PRIOR APPLICATION NUMBER: PCT/US00/14042
58 <151> PRIOR FILING DATE: 2000-05-22
60 <150> PRIOR APPLICATION NUMBER: PCT/US00/23328
61 <151> PRIOR FILING DATE: 2000-08-24
63 <150> PRIOR APPLICATION NUMBER: PCT/US00/32678
64 <151> PRIOR FILING DATE: 2000-12-01
66 <150> PRIOR APPLICATION NUMBER: PCT/US01/06520
```

RAW SEQUENCE LISTING   DATE: 09/13/2001
PATENT APPLICATION: US/09/938,418   TIME: 11:04:36

Input Set : A:\P5009R1_sequence_listing.wpd
Output Set: N:\CRF3\09132001\I938418.raw

67 <151> PRIOR FILING DATE: 2001-02-28
69 <150> PRIOR APPLICATION NUMBER: PCT/US01/17800
70 <151> PRIOR FILING DATE: 2001-06-01
72 <150> PRIOR APPLICATION NUMBER: PCT/US01/19692
73 <151> PRIOR FILING DATE: 2001-06-20
75 <150> PRIOR APPLICATION NUMBER: PCT/US01/21066
76 <151> PRIOR FILING DATE: 2001-06-29
78 <150> PRIOR APPLICATION NUMBER: PCT/US01/21735
79 <151> PRIOR FILING DATE: 2001-07-09
81 <160> NUMBER OF SEQ ID NOS: 10
83 <210> SEQ ID NO: 1
84 <211> LENGTH: 537
85 <212> TYPE: DNA
86 <213> ORGANISM: Homo Sapien
88 <400> SEQUENCE: 1
89 taaaacagct acaatattcc agggccagtc acttgccatt tctcataaca 50
91 gcgtcagaga gaaagaactg actgaaacgt ttgagatgaa gaaagttctc 100
93 ctcctgatca cagccatctt ggcagtggct gttggtttcc cagtctctca 150
95 agaccaggaa cgagaaaaaa gaagtatcag tgacagcgat gaattagctt 200
97 cagggttttt tgtgttccct tacccatatc catttcgccc acttccacca 250
99 attccatttc caagatttcc atggtttaga cgtaattttc ctattccaat 300
101 acctgaatct gcccctacaa ctccccttcc tagcgaaaag taaacaagaa 350
103 ggataagtca cgataaacct ggtcacctga aattgaaatt gagccacttc 400
105 cttgaagaat caaaattcct gttaataaaa gaaaaacaaa tgtaattgaa 450
107 atagcacaca gcattctcta gtcaatatct ttagtgatct tctttaataa 500
109 acatgaaagc aaagattttg gtttcttaat ttccaca 537
111 <210> SEQ ID NO: 2
112 <211> LENGTH: 1257
113 <212> TYPE: DNA
114 <213> ORGANISM: Homo Sapien
116 <400> SEQUENCE: 2
117 ggagagaggc gcgcgggtga aaggcgcatt gatgcagcct gcggcggcct 50
119 cggagcgcgg cggagccaga cgctgaccac gttcctctcc tcggtctcct 100
121 ccgcctccag ctccgcgctg cccggcagcc gggagccatg cgaccccagg 150
123 gccccgccgc ctccccgcag cggctccgcg gcctcctgct gctcctgctg 200
125 ctgcagctgc ccgcgccgtc gagcgcctct gagatcccca gggggaagca 250
127 aaaggcgcag ctccggcaga gggaggtggt ggacctgtat aatggaatgt 300
129 gcttacaagg gccagcagga gtgcctggtc gagacgggag ccctggggcc 350
131 aatgttattc cgggtacacc tgggatccca ggtcgggatg gattcaaagg 400
133 agaaaagggg gaatgtctga gggaaagctt tgaggagtcc tggacaccca 450
135 actacaagca gtgttcatgg agttcattga attatggcat agatcttggg 500
137 aaaattgcgg agtgtacatt tacaaagatg cgttcaaata gtgctctaag 550
139 agttttgttc agtggctcac ttcggctaaa atgcagaaat gcatgctgtc 600
141 agcgttggta tttcacattc aatggagctg aatgttcagg acctcttccc 650
143 attgaagcta taatttattt ggaccaagga agccctgaaa tgaattcaac 700
145 aattaatatt catcgcactt cttctgtgga aggactttgt gaaggaattg 750
147 gtgctggatt agtggatgtt gctatctggg ttggcacttg ttcagattac 800
149 ccaaaaggag atgcttctac tggatggaat tcagtttctc gcatcattat 850
151 tgaagaacta ccaaaataaa tgctttaatt ttcatttgct acctctttt 900

RAW SEQUENCE LISTING   DATE: 09/13/2001
PATENT APPLICATION: US/09/938,418   TIME: 11:04:36

Input Set : A:\P5009R1_sequence_listing.wpd
Output Set: N:\CRF3\09132001\I938418.raw

```
153   ttattatgcc ttggaatggt tcacttaaat gacattttaa ataagtttat 950
155   gtatacatct gaatgaaaag caaagctaaa tatgtttaca gaccaaagtg 1000
157   tgatttcaca ctgtttttaa atctagcatt attcattttg cttcaatcaa 1050
159   aagtggtttc aatatttttt ttagttggtt agaatacttt cttcatagtc 1100
161   acattctctc aacctataat ttggaatatt gttgtggtct tttgtttttt 1150
163   ctcttagtat agcattttta aaaaaatata aaagctacca atctttgtac 1200
165   aatttgtaaa tgttaagaat ttttttata tctgttaaat aaaaattatt 1250
167   tccaaca 1257
169   <210> SEQ ID NO: 3
170   <211> LENGTH: 1847
171   <212> TYPE: DNA
172   <213> ORGANISM: Homo Sapien
174   <400> SEQUENCE: 3
175   gccagggaa gagggtgatc cgacccgggg aaggtcgctg ggcagggcga 50
177   gttgggaaag cggcagcccc cgccgccccc gcagcccctt ctcctccttt 100
179   ctcccacgtc ctatctgcct ctcgctggag gccaggccgt gcagcatcga 150
181   agacaggagg aactggagcc tcattggccg gcccggggcg ccggcctcgg 200
183   gcttaaatag gagctccggg ctctggctgg gacccgaccg ctgccggccg 250
185   cgctcccgct gctcctgccg ggtgatggaa aaccccagcc cggccgccgc 300
187   cctgggcaag gccctctgcg ctctcctcct ggccactctc ggcgccgccg 350
189   gccagcctct tggggggagag tccatctgtt ccgccagagc cccggccaaa 400
191   tacagcatca ccttcacggg caagtggagc cagacggcct tccccaagca 450
193   gtaccccctg ttccgccccc ctgcgcagtg gtcttcgctg ctgggggccg 500
195   cgcatagctc cgactacagc atgtggagga agaaccagta cgtcagtaac 550
197   gggctgcgcg actttgcgga gcgcggcgag gcctgggcgc tgatgaagga 600
199   gatcgaggcg gcgggggagg cgctgcagag cgtgcacgag gtgttttcgg 650
201   cgcccgccgt ccccagcggc accgggcaga cgtcggcgga gctggaggtg 700
203   cagcgcaggc actcgctggt ctcgtttgtg gtgcgcatcg tgcccagccc 750
205   cgactggttc gtgggcgtgg acagcctgga cctgtgcgac ggggaccgtt 800
207   ggcgggaaca ggcggcgctg gacctgtacc cctacgacgc cgggacggac 850
209   agcggcttca ccttctcctc ccccaacttc gccaccatcc cgcaggacac 900
211   ggtgaccgag ataacgtcct cctctcccag ccacccggcc aactccttct 950
213   actacccgcg gctgaaggcc ctgcctccca tcgccagggt gacactgctg 1000
215   cggctgcgac agagccccag ggccttcatc cctcccgccc cagtcctgcc 1050
217   cagcagggac aatgagattg tagacagcgc ctcagttcca gaaacgccgc 1100
219   tggactgcga ggtctccctg tggtcgtcct ggggactgtg cggaggccac 1150
221   tgtgggaggc tcgggaccaa gagcaggact cgctacgtcc gggtccagcc 1200
223   cgccaacaac gggagcccct gccccgagct cgaagaagag gctgagtgcg 1250
225   tccctgataa ctgcgtctaa gaccagagcc ccgcagcccc tggggccccc 1300
227   cggagccatg gggtgtcggg ggctcctgtg caggctcatg ctgcaggcgg 1350
229   ccgagggcac aggggggtttc gcgctgctcc tgaccgcggt gaggccgcgc 1400
231   cgaccatctc tgcactgaag ggccctctgg tggccggcac gggcattggg 1450
233   aaacagcctc ctcctttccc aaccttgctt cttaggggcc cccgtgtccc 1500
235   gtctgctctc agcctcctcc tcctgcagga taaagtcatc cccaaggctc 1550
237   cagctactct aaattatgtc tccttataag ttattgctgc tccaggagat 1600
239   tgtccttcat cgtccagggg cctggctccc acgtggttgc agatacctca 1650
241   gacctggtgc tctaggctgt gctgagccca ctctcccgag ggcgcatcca 1700
243   agcgggggcc acttgagaag tgaataaatg gggcggtttc ggaagcgtca 1750
245   gtgtttccat gttatggatc tctctgcgtt tgaataaaga ctatctctgt 1800
```
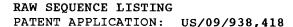
RAW SEQUENCE LISTING   DATE: 09/13/2001
PATENT APPLICATION: US/09/938,418   TIME: 11:04:36

Input Set : A:\P5009R1_sequence_listing.wpd
Output Set: N:\CRF3\09132001\I938418.raw

```
247  tgctcacaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 1847
249  <210> SEQ ID NO: 4
250  <211> LENGTH: 4040
251  <212> TYPE: DNA
252  <213> ORGANISM: Homo Sapien
254  <400> SEQUENCE: 4
255  gaggaaccta ccggtaccgg ccgcgcgctg gtagtcgccg gtgtggctgc 50
257  acctcaccaa tcccgtgcgc cgcggctggg ccgtcggaga gtgcgtgtgc 100
259  ttctctcctg cacgcggtgc ttgggctcgg ccaggcgggg tccgccgcca 150
261  gggtttgagg atggggggagt agctacagga agcgaccccg cgatggcaag 200
263  gtatattttt gtggaatgaa aaggaagtat tagaaatgag ctgaagacca 250
265  ttcacagatt aatatttttg gggacagatt tgtgatgctt gattcaccct 300
267  tgaagtaatg tagacagaag ttctcaaatt tgcatattac atcaactgga 350
269  accagcagtg aatcttaatg ttcacttaaa tcagaacttg cataagaaag 400
271  agaatgggag tctggttaaa taaagatgac tatatcagag acttgaaaag 450
273  gatcattctc tgttttctga tagtgtatat ggccatttta gtgggcacag 500
275  atcaggattt ttacagttta cttggagtgt ccaaaactgc aagcagtaga 550
277  gaaataagac aagctttcaa gaaattggca ttgaagttac atcctgataa 600
279  aaacccgaat aacccaaatg cacatggcga ttttttaaaa ataaatagag 650
281  catatgaagt actcaaagat gaagatctac ggaaaaagta tgacaaatat 700
283  ggagaaaagg gacttgagga taatcaaggt ggccagtatg aaagctggaa 750
285  ctattatcgt tatgattttg gtatttatga tgatgatcct gaaatcataa 800
287  cattggaaag aagagaattt gatgctgctg ttaattctgg agaactgtgg 850
289  tttgtaaatt tttactcccc aggctgttca cactgccatg atttagctcc 900
291  cacatggaga gactttgcta aagaagtgga tgggttactt cgaattggag 950
293  ctgttaactg tggtgatgat agaatgcttt gccgaatgaa aggagtcaac 1000
295  agctatccca gtctcttcat ttttcggtct ggaatggccc cagtgaaata 1050
297  tcatggagac agatcaaagg agagtttagt gagttttgca atgcagcatg 1100
299  ttagaagtac agtgacagaa ctttggacag gaaattttgt caactccata 1150
301  caaactgctt ttgctgctgg tattggctgg ctgatcactt tttgttcaaa 1200
303  aggaggagat tgtttgactt cacagacacg actcaggctt agtggcatgt 1250
305  tgtttctcaa ctcattggat gctaaagaaa tatatttgga agtaatacat 1300
307  aatcttccag attttgaact actttcggca aacacactag aggatcgttt 1350
309  ggctcatcat cggtggctgt tattttttca ttttggaaaa aatgaaaatt 1400
311  caaatgatcc tgagctgaaa aaactaaaaa ctctacttaa aaatgatcat 1450
313  attcaagttg gcaggtttga ctgttcctct gcaccagaca tctgtagtaa 1500
315  tctgtatgtt tttcagccgt ctctagcagt atttaaagga caaggaacca 1550
317  aagaatatga aattcatcat ggaaagaaga ttctatatga tatacttgcc 1600
319  tttgccaaag aaagtgtgaa ttctcatgtt accacgcttg gacctcaaaa 1650
321  ttttcctgcc aatgacaaag aaccatggct tgttgatttc tttgcccct 1700
323  ggtgtccacc atgtcgagct ttactaccag agttacgaag agcatcaaat 1750
325  cttctttatg gtcagcttaa gtttggtaca ctagattgta cagttcatga 1800
327  gggactctgt aacatgtata acattcaggc ttatccaaca acagtggtat 1850
329  tcaaccagtc caacattcat gagtatgaag gacatcactc tgctgaacaa 1900
331  atcttggagt tcatagagga tcttatgaat ccttcagtgg tctcccttac 1950
333  acccaccacc ttcaacgaac tagttacaca aagaaaacac aacgaagtct 2000
335  ggatggttga tttctattct ccgtggtgtc atccttgcca agtcttaatg 2050
337  ccagaatgga aaagaatggc ccggacatta actggactga tcaacgtggg 2100
339  cagtatagat tgccaacagt atcattcttt ttgtgcccag gaaaacgttc 2150
```

RAW SEQUENCE LISTING   DATE: 09/13/2001
PATENT APPLICATION: US/09/938,418   TIME: 11:04:36

Input Set : A:\P5009R1_sequence_listing.wpd
Output Set: N:\CRF3\09132001\I938418.raw

```
341  aaagataccc tgagataaga tttttttcccc caaaatcaaa taaagcttat 2200
343  cagtatcaca gttacaatgg ttggaatagg gatgcttatt ccctgagaat 2250
345  ctggggtcta ggatttttac ctcaagtatc cacagatcta acacctcaga 2300
347  ctttcagtga aaaagttcta caagggaaaa atcattgggt gattgatttc 2350
349  tatgctcctt ggtgtggacc ttgccagaat tttgctccag aatttgagct 2400
351  cttggctagg atgattaaag gaaaagtgaa agctggaaaa gtagactgtc 2450
353  aggcttatgc tcagacatgc cagaaagctg ggatcagggc ctatccaact 2500
355  gttaagtttt atttctacga aagagcaaag agaaattttc aagaagagca 2550
357  gataaatacc agagatgcaa aagcaatcgc tgccttaata agtgaaaaat 2600
359  tggaaactct ccgaaatcaa ggcaagagga ataaggatga actttgataa 2650
361  tgttgaagat gaagaaaaag tttaaaagaa attctgacag atgacatcag 2700
363  aagacaccta tttagaatgt tacatttatg atgggaatga atgaacatta 2750
365  tcttagactt gcagttgtac tgccagaatt atctacagca ctggtgtaaa 2800
367  agaagggtct gcaaactttt tctgtaaagg gccggtttat aaatatttta 2850
369  gactttgcag gctataatat atggttcaca catgagaaca agaatagagt 2900
371  catcatgtat tctttgttat ttgctttaa caacctttaa aaaatattaa 2950
373  aacgattctt agctcagagc catacaaaag taggctggat tcagtccatg 3000
375  gaccatagat tgctgtcccc ctcgacggac ttataatgtt tcaggtggct 3050
377  ggcttgaaca tgagtctgct gtgctatcta cataaatgtc taagttgtat 3100
379  aaagtccact ttcccttcac gttttttggc tgacctgaaa agaggtaact 3150
381  tagtttttgg tcacttgttc tcctaaaaat gctatcccta accatatatt 3200
383  tatatttcgt tttaaaaaca cccatgatgt ggcacagtaa acaaaccctg 3250
385  ttatgctgta ttattatgag gagattcttc attgtttct ttccttctca 3300
387  aaggttgaaa aaatgctttt aatttttcac agccgagaaa cagtgcagca 3350
389  gtatatgtgc acacagtaag tacacaaatt tgagcaacag taagtgcaca 3400
391  aattctgtag tttgctgtat catccaggaa aacctgaggg aaaaaaatta 3450
393  tagcaattaa ctgggcattg tagagtatcc taaatatgtt atcaagtatt 3500
395  tagagttcta tattttaaag atatatgtgt tcatgtattt tctgaaattg 3550
397  ctttcataga aattttccca ctgatagttg atttttgagg catctaatat 3600
399  ttacatattt gccttctgaa ctttgtttg acctgtatcc tttatttaca 3650
401  ttgggttttt ctttcatagt tttggttttt cactcctgtc cagtctattt 3700
403  attattcaaa taggaaaaat tactttacag gttgtttac tgtagcttat 3750
405  aatgatactg tagttattcc agttactagt ttactgtcag agggctgcct 3800
407  ttttcagata aatattgaca taataactga agttatttt ataagaaat 3850
409  caagtatata aatctaggaa agggatcttc tagtttctgt gttgtttaga 3900
411  ctcaaagaat cacaaatttg tcagtaacat gtagttgttt agttataatt 3950
413  cagagtgtac agaatggtaa aaattccaat cagtcaaaag aggtcaatga 4000
415  attaaaaggc ttgcaacttt ttcaaaaaaa aaaaaaaaaa 4040
417 <210> SEQ ID NO: 5
418 <211> LENGTH: 1915
419 <212> TYPE: DNA
420 <213> ORGANISM: Homo Sapien
422 <400> SEQUENCE: 5
423  ggcaacatgg ctcagcaggc ttgccccaga gccatggcaa agaatggact 50
425  tgtaatttgc atcctggtga tcaccttact cctggaccag accaccagcc 100
427  acacatccag attaaaagcc aggaagcaca gcaaacgtcg agtgagagac 150
429  aaggatggag atctgaagac tcaaattgaa aagctctgga cagaagtcaa 200
431  tgccttgaag gaaattcaag ccctgcagac agtctgtctc cgaggcacta 250
433  aagttcacaa gaaatgctac cttgcttcag aaggtttgaa gcatttccat 300
```

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/938,418

DATE: 09/13/2001
TIME: 11:04:37

Input Set : **A:\P5009R1_sequence_listing.wpd**
Output Set: **N:\CRF3\09132001\I938418.raw**

L:18 M:270 C: Current Application Number differs, Replaced Current Application No
L:18 M:271 C: Current Filing Date differs, Replaced Current Filing Date